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### The Identity of the British *Nonagria neurica* (with plate).

By H. M. EDELSTEN, F.E.S.

Hübner figured (*Sammlung Europäischer Schmetterlinge*, plates 82 and 144) two insects, viz.:—Plate 82, fig. 381 (upperside only), under the name *neurica*, and Plate 144, figs. 659-661 (♂, ♀, and underside of a dark reddish-brown insect, showing the *central spot beneath*), which he also called *neurica*.

In 1816, Ochsenheimer, in his "Systema Glossatorum Europæ" catalogues (*Die Schmett.*, iv., p. 82) *N. neurica*, Hb., and, as quoted by Treitschke,\* considers *neurica*, Hb. † = the reed-coloured form without marks on the underside. In his collection he has a true *neurica*, Hb., designated as such by a label written with his own hand; beneath this specimen is a typical *arundineta*, Schmidt, which has a label, on which is written, in Ochsenheimer's handwriting, "An eadem cum præcedente? sub nomine *Noctua dissoluta*."

In 1825, Treitschke, after Ochsenheimer's death, received (*Die Schmett.*, v., pt. 2, p. 319) *darker insects marked beneath*, viz., *N. dissoluta*. ‡ He thinks Hübner meant to have so called his figs. 659-60. He adds that further consignments proved conclusively that Hübner was right to call *neurica* all the forms marked above (light or dark) and underneath (black-marked or unmarked), but, he continues, that all the ranges of colour are *neurica*, and describes the underside as being unmarked, or with central spots. He confuses the two as one species, and must mean that *dissoluta* should be the varietal name for *neurica*, Hb., figs. 659-60; and he ends in describing a larva, which was subsequently proved to be that of var. *arundineta*, Schmidt. In Treitschke's collection there are, under the label *neurica*, five specimens. The first is a *neurica*, Hb., fig. 381; the second, third, and fourth are *arundineta*, Schmidt; and the fifth is the dark *neurica*, Hb., figs. 659-661.

Treitschke says (*Die Schmetterlinge von Europa*, v., pt. 2, p. 319): "*Nonagria alis anticis flavo vel fusco ferrugineis, vena maculaque medio albicantibus, serie punctorum nigrorum ad marginem externum.* Ochsenheimer has referred to Hübner's *neurica* on p. 82 of his *Entwurf.*, and understood by it the reed-coloured form without marks

\* I presume Ochsenheimer had said something to Treitschke about this matter.—H.M.E.

† Probably Mazzola had worked this out.—H.M.E.

‡ ? Mazzola had called these *N. dissoluta*, but had not published his observations.—H.M.E.

on the underside, of which there were a few examples in Mazzola's and his own collections under this name, and which came from the Rhine district. Later, we received from thence some very much darker moths, marked on the underside, under the name *N. dissoluta*. They agreed exactly with Hübner's figs. 659-661. It therefore seemed certain that Hübner had repeated the name *neurica* by mistake, whereas *dissoluta* should have been given instead. Further consignments have, since then, conclusively proved that Hübner was right to call all the forms *neurica*, whether marked above, dark or light, and underneath with or without black markings; all are connected by the slightest gradations, and, furthermore, it confirmed what had already been said about the variability of this plain-looking creature. *Neurica* varies in tone from reed-coloured to the deepest yellowish dark-brown, as do also *paludicola* (*geminipuncta*), *typhae*, and others. The head and thorax are coloured like the forewings, the abdomen is lighter, inclining towards grey, that of the ♂ especially long and slender, with yellowish-brown anal tuft. The antennæ are bright yellow, fine, serrate in the ♂. Legs brown-yellow. The forewings are short, broad, pointed at the apex. They vary as mentioned, so much so that the intermediate form connecting the two varieties has lighter and darker parts. On all which are not quite without marks, the broad outer margin is the lightest, and without the black specks which irregularly cover the other parts. The median vein is white longitudinally, bordered with black. Beyond the middle of the wing is a black dot with *white bordering* which is sometimes formed like a figure 8, very rarely with no margin. Before the outer margin a more or less defined double row of dots crosses the vein; there are two dots next to the inner margin, and there is a row of black and white streaks in the other part of the shaded band where the wings usually become darkest as far as the fringes. These are bordered with clear black dots, otherwise lighter than the ground colour and simple. The hindwings are yellowish-white towards the base, more or less dusted with grey posteriorly, with the lunules and smaller lunular marks as a border to the whitish fringes. The underside is yellowish, grey dusted, sometimes unmarked, sometimes with central spots and dots before the fringes, often also with a curved line and a shade almost forming a band before it. The larva is dirty-white with pale red back, lives in the interior of the reeds, and changes in June or July to a pupa, head downwards. The moth appears in four weeks (according to information from Herr Hess, of Darmstadt). In mode of living and changing it resembles the following species, *paludicola* (*geminipuncta*). I only know the district of Darmstadt as its habitat, and there the moth is rather rare."

Duponchel described and figured (*Papillons de France*, vii., pt. 1, p. 85, pl. 106, fig. 2), as *neurica*, the var. *arundineta*, Schmidt. He writes: "The forewings are pale grey-yellowish above, finely dusted with brown, with the two or three middle nervures white, central spot blackish, surrounded with white, and two transverse rows of dots equally blackish, one of which separates the fringe from the outer margin, and the other is placed at an equal distance from this same margin and the central spot above mentioned. The dots of this last row rest on the little lines which correspond with the nervures. The fringe is simple and of the same

colour as the base of the wing. The hindwings above are of the same grey colour as the forewings, but rather paler, of the same colour as the underside of the four wings, which each have a central black spot. The head and collar are of the same grey as the forewings. The body participates in the tinge of the forewings. The antennæ are of a greyish-yellowish and simple in both sexes. The larva is of a dirty white colour, with the back of a pale reddish tinge. It lives in the interior of the reeds. It turns to a chrysalis in June and July, and the moth emerges three or four weeks afterwards. *N. neurica* is rare in France."

In 1840, Boisduval describes (*Genera et Index Methodicus*, p. 134, no. 1081) the dark form of *neurica*, Hb., fig. 659 (? a var. of *neurica*), and names it *hessii*, and says that Hess sent it to him as a variety of *neurica*; he also mentions that Treitschke refers in his synonymy to true *neurica*. He concludes by saying "an rite?" His description reads: "No. 1081. *Hessii*, Boisd. (an var. *neuricae*?). *Neurica*, Hb., 659. Alæ anticæ nigro-fuscæ, macula reniformi albida, intus fusca; alæ posticæ pallidæ. Dom. Hess, qui abunde Nonagrias circa Darmstadt educit, mihi ut variet *neurica* hanc speciem misit. Dom. Treitschke quoque in synonymia ad *neuricam* genuinam refert. An rite?"

Prof. Hering describes (*Stett. Ent. Zeit.*, iv., no. 11, p. 345), in November, 1843, a larva with light reddish back as that of *neurica*, and says: "I have found the larvæ at the beginning of July in *Arundo phragmites*, when I have been searching for those of *N. paludicola*, often in the very same reed stem. Whereas *paludicola* mostly lives in the lower part of the reed, I find *neurica* always in the upper portion. Then it is always rarer than the former. Its presence is always betrayed by the withered top of the reed. It is distinguished from the larva of *paludicola* by being always more slender, of more delicate structure, and by the light reddish colour of the back. Its rearing indoors was not more difficult than the former. I cut the reed stems beneath the boring and above the joint, as also with *paludicola*, and stand the shortened stems in wet sand. It pupates always towards the end of June and becomes a moth, always earlier than *paludicola*, in the last days of July."

In 1845, Herrich-Schäffer figures (*Schmett. v. Europ.*, ii., p. 244, figs. 347-348, ♀) as *neurica* what Schmidt recognises as *arundineta*. He describes it, and says that it differs from Hübner's fig. 381, which, he says, is "totally defective in its outlines, forewings much too large," as compared with the insect he is figuring. Afterwards, when Schmidt sent him *neurica* and *arundineta* he acknowledges them as two species. He also describes *hessii* and refers to Hübner's illustrations, 657-661, as "much too robust, outline of the wings defective." He says: "No. 189. *Neurica* (Hb. 381).—Totally defective in its outlines, forewings much too large. Fuscotestacea loco stigmatis reniformis annulo albo, fusco repleto. Hindmargin with sharply marked black lunules between the nervures, the outer transverse line indicated by black dots which are shown up by white on both sides. Dark reed-colour, a longitudinal darker ray through the middle of the forewing, before this, towards the costa, some black dots, two indicating the position of the central spot, the third indicating the inner boundary of the front half of the reniform. Hindwing lighter, without

markings. Around Darmstadt, August." "No. 187. *Hessii*, Boisd. ; *neurica*, Hb. 659-61.—Much too robust, outline of the forewings defective. Fuscoferruginea, stigate reniformi versus limbum et marginem interiorem albocincto. Differs from *neurica* in appearance only by the reddish-brown colour of the forewings. The central spot extending more towards the outer margin, its form seems more like the usual reniform, the three dots, however, on its outer border are missing. Darmstadt."

(To be continued.)

### Myrmecophilous notes for 1906 (with two plates).

By H. St. J. K. DONISTHORPE, F.Z.S., F.E.S.

(Concluded from vol. xviii., p. 319.)

DIPTERA.—*Ceratopogon myrmecophilus*, Egger.—I have this year bred several ♂s and ♀s of this rare species out of my observation nest of *Formica rufa* from Weybridge. Mr. Morley tells me he has taken it in Suffolk. It will be remembered that I took it for the first time in Britain a few years ago at Oxshott.

*Phyllomyza*, n. sp.?—All the specimens recorded from ants' nests heretofore as *Phyllomyza securicornis*, Fln., are not that species, Mr. Collin tells me, but include two species new to science, one found with *Formica rufa*, and the other with *Lasius fuliginosus*. The former I bred in some numbers from my *F. rufa* nest from Weybridge this year, and have taken it before at Oxshott. The latter I have bred in numbers from my *L. fuliginosus* nest from Wellington College, and have taken it before at Oxshott and Birkdale sandhills. Mr. Collin will shortly describe and figure them.

*Scatopse injumata*, Hal.—I bred this species this year from my Weybridge *F. rufa* nest.

*Scatopse transversalis*, n. var.—I bred this species also in numbers from my Wellington College nest of *Lasius fuliginosus*. Last year I took it with the same ant on the Birkdale sandhills.

*Phora inaequalis*, Wood.—I took this species in plenty with *Lasius fuliginosus*, at Wellington College. It occurred in numbers in the actual nest of the ant (which contained the ants' larvæ), built in the inside of a post, and must have bred there.

*Phora pulicaria*, Fald.—I bred this species from my Weybridge *F. rufa* nest. Wasmann records it from the same ant's nest.

*Limosina curtiventris*, Stnh.—I bred this little fly in numbers from my Wellington College *L. fuliginosus* nest. This nest, from which I have taken so many species, consists of several handfuls of *débris* out of the heart of a nest in the root of a birch-tree, full of ants and ant larvæ. As I noticed it also contained numbers of dipterous larvæ, I brought it home and put it into a large glass bowl. I also bred from it several species of *Sciara* in some numbers.

*Trineura aterrima*, Fab.—I took this species with *L. fuliginosus*, at Wellington College.

BRACONIDÆ.—*Sp.* 1?—I took two specimens of a handsome black species, with yellow legs and dusky wings, at Weybridge, in July. I saw several hovering over an anthill (*F. rufa*). They were hovering in the air like birds of prey, and every now and then swooping at the